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TITLE: Assembly to lay continuous web in zigzag folds to form stack

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PATENT-FAMILY:

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DE 19803837 A1	August 5, 1999	N/A	015
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ABSTRACTED-PUB-NO: DE19803837A

BASIC-ABSTRACT: NOVELTY - To lay a web material (1) into zigzag folds to form a stack (20), the web travels in a vertical downwards path to be gripped by one of a pair of curved or angled surfaces (5,5') on axes parallel to the web line.

On being carried by the surface for a length, of about one-half of the zigzag fold, the web is released to drop on to the stack (20).

DETAILED DESCRIPTION - The web is gripped by the other surface (5,5') of the pair, and the movement is repeated in the opposite direction.

The material gripped by the surface (5,5') moves with it at its rotary speed vector. The web is held by moving grips, to be drawn over a static curved surface, or the curved surfaces rotate with grippers (12,12') which are fixed to and rotate with them. The web (1) is gripped at right angles to its direction of travel on its flat movement path. After a given number of zigzag layers have been laid, the stack (20) is advanced without interrupting in the web (1) movement, for a fresh stack (20) to be formed.

An INDEPENDENT CLAIM is included for a web laying assembly, with facing curved surfaces (5,5') to guide the web (1) in alternating movements, using rollers (10,10') which are static or rotate against each other. They have a steady or pendulum rotating movement action. The rollers (10,10') have at least one controlled web gripper (12,12') at the periphery.

The grippers (12,12') have a controlled gripper jaw (12,12') in an axially parallel groove, which does not extend beyond the roller circumference. A

projecting bar (3,3') at the roller is opposite the gripper, to push the web (1) into the gripper of the other roller.

Each roller (10,10') has a groove (4,4') and a projecting bar (3,3') offset from each other by 180 deg. at the circumference. The stack (20) is formed from above on an elevator with height adjustment. The laying surface of the elevator has separate tines, and at least one roller has a mantle with grooves round it for the tines to move in and out of them.

Two elevators can be used, serving alternately as laying surfaces for the stacks. Both elevators have tines at different intervals, to give a stack exchange when the tines are moved together.

USE - The technique is for handling a web of textiles, non wovens or film into zigzag folds, over each other, to form a stack.

ADVANTAGE - The method gives a high speed stack laying operation, without stress on the web material.

DESCRIPTION OF DRAWING(S) - The drawing shows a schematic side view of the web laying assembly.

Web 1

Projecting roller bars 3,3'

Roller grooves 4,4'

Curved surfaces 5,5'

Rollers 10,10'

Grippers 12,12'

Stack 20

CHOSEN-DRAWING: Dwg.2a/7

TITLE-TERMS:

ASSEMBLE LAY CONTINUOUS WEB ZIGZAG FOLD FORM STACK

DERWENT-CLASS: A35 F07 Q36

CPI-CODES: A11-C06; F03-K01;

ENHANCED-POLYMER-INDEXING:

Polymer Index [1.1]

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Polymer Index [1.2]

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